

## **WHAT I CLAIM IS:**

1. A system for supporting formwork for forming a crown on a concrete column of a highway bridge, said system comprising a pair of brackets attachable to opposite sides of said column, said bracket including:

a box-shaped upright defined by spaced apart inner and outer walls connected by sidewalls, a central partition positioned between said sidewalls and connected to said inner and outer walls, a set of aligned openings formed respectively in an upper portion of said inner wall and said outer wall, and a set of tubes positioned on respective sides of said central partition to aligned respectively with said opening sets,

a horizontally positioned support arm defined by spaced apart channel members having inner ends attached said upright outer wall immediately below said outer wall openings, an end plate attached to outer ends of said channel members, a jack-screw plate formed with a jack-screw opening attached to top flanges of said channel members, a jack-screw tube carried by said channel members inward from said end plate to align with said jack-screw plate opening, and a pair of reinforcing plates attached respectively to said channel members and to said upright outer wall, and

a pair of angularly positioned tubular braces having lower ends attached to said upright outer wall and upper ends attached respectively to bottom flanges of said support arm channel members,

a jack-screw having a lower end extending downward through said jack-screw plate opening and an upper end prepared to operatively connect with said formwork, and

an adjusting nut threadedly disposed on said jack-screw to seat on said bracket support

arm jack-screw plate,

wherein for use, said brackets are affixed to respective sides of said column by bolts extending outward from respective said sides of said column and through said sets of aligned openings in each said bracket upright inner and outer walls, said formwork is attached to said upper ends of said jack-screws, and a vertical location of said formwork is adjusted by rotation of said jack-screw nuts.

2. A system as defined by Claim 1 and further characterized by,  
said inner wall, said outer wall, and said central partition of each said bracket upright being integrally formed to have a H-beam like cross-sectional shape.

3. A system as defined by Claim 2 and further characterized by,  
said sidewalls of said each bracket upright being inwardly offset from side edges of said inner and outer walls.

4. A system as defined by Claim 1 and further characterized by,  
bottom ends of each said bracket upright inner wall and said central partition extending below bottom ends of said upright outer wall and sidewalls, and  
said bottom end of said inner wall being formed with spaced apart oblong-shaped openings located on respective sides of said partition.

5. A system as defined by Claim 1 and further characterized by,  
said jack-screw tube of each said bracket having a square-like cross-sectional shape, and  
bottom ends of said tubes extending below said bottom flanges of said arm channel members.

6. A system as defined by Claim 5 and further characterized by,  
said bottom end of each said bracket jack-screw tube fitting between said upper ends of  
said bracket braces.

7. A system as defined by Claim 1 and further characterized by,  
said reinforcing plates of each said bracket having top and bottom edges extending  
respectively above and below said upper and lower flanges of said support arm channel members.

8. A system as defined by Claim 1 and further characterized by,  
each said bracket having a top plate attached to top ends of said upright walls, and  
a lifting lug attached to said top wall and positioned in proximate vertical alignment with a  
center of gravity of said bracket.

9. A bracket particularly adapted for supporting formwork for casting a crown on an  
upper end of a highway bridge concrete column, said bracket comprising:

an upright having a box-like shape, said upright including an inner partition extending  
between an inner wall and an outer wall of said upright,

an arm attached to said upright outer wall and extending outward therefrom, said arm  
including a jack-screw plate attached to an outer end of said arm with said plate having an  
opening aligned with a vertically positioned tube carried by said arm, and

a brace having an upper end attached to said arm outer end and a lower end attached to  
said upright outer wall,

wherein during use said bracket is attached to a side of said column, and a lower end of a

jack-screw is disposed in said jack-screw plate opening and tube with a vertical position of said jack-screw adjustably secured by a nut threaded onto said jack-screw and seated on said jack-screw plate.

10. A bracket particularly adapted for supporting formwork for casting a crown on an upper end of a concrete column, said bracket comprising:

an upright having spaced apart inner and outer walls connected by sidewalls and an inner partition located between said sidewalls, a pair of aligned openings formed in an upper portion of said inner wall and said outer wall, a pair of tubes fitting between and aligned respectively with each said opening pair, and a top plate joined to top ends of said inner wall, said outer wall, and said sidewalls,

an arm defined by a pair of spaced apart channel members having inner ends attached to said upright outer wall, an end plate attached to outer ends of said channel members, a jack-screw plate attached to top flanges of the channel members adjacent to said end plate, and a jack-screw tube carried by said arm between said channel members to align with an opening in said jack-screw plate,

a pair of reinforcing plates attached to respective side edges of said arm channel member top flanges, to side edges of bottom flanges of said channel members, and to said upright outer wall with top and bottom edges of said plates extending respectively above and below said channel member flanges, and

a pair of spaced apart braces having upper ends attached respectively to lower surfaces of said arm channel member bottom flanges adjacent a bottom end of said jack-screw tube and lower

ends attached to said upright outer wall,

wherein for use an end of a cross-beam carried by said column is selectively inserted through one said pair of said bracket upright openings and said bracket is compressively secured to said column with a nut operatively assembled on said cross-beam end, a jack-screw is positioned in said bracket arm jack-screw plate opening and jack-screw tube and adjustably secured therein by a nut operatively assembled on said jack-screw and seated on said jack-screw plate, and an upper end of said jack-screw is connected to said formwork to support said formwork and contained uncured concrete as said concrete cures to form said crown.

11. A bracket as defined by Claim 10 and further characterized by,  
a lifting lug attached to said bracket upright top plate to proximately align vertically with a center of gravity of said bracket,  
said upright sidewalls being inwardly offset from side edges of said inner and outer walls,  
bottom ends of said upright inner wall and partition being downwardly offset from bottom ends of said upright outer wall and said upright sidewalls, and  
said upright inner wall having a pair of spaced apart, oblong-shaped openings located below said upright sidewall bottom ends.

12. A bracket as defined by Claim 10 and further characterized by,  
said upright inner wall, said outer wall and said partition being an integrally formed structural steel H-beam.